

### ABSTRACT

An acetabular component for a hip replacement system comprises an acetabular shell, and a liner having a seal for insertion into the acetabular shell. In the preferred embodiment, the shell has a smooth tapered surface in its peripheral inner surface, and the liner has several annular ridges protruding from its outer surface. Upon insertion of the liner into the shell, the annular ridges of the liner come into sealing engagement with the smooth tapered surface of the shell. This sealing engagement substantially prevents a migration of debris along an interface of the liner with the shell. The liner is provided with several peripheral tabs for interference fit with several peripheral notches in the shell. An interlock comprising another liner ridge and a shell groove, provide a positive engagement to hold the liner in the shell as it bottoms therein. In an alternative embodiment, each notch is provided with protruding lips which project into the notch and firmly grasp one of the tabs of the liner upon insertion of the liner into the shell. In this manner, micromotion between the liner and the shell is substantially inhibited.